

**Eötvös Loránd University of Sciences
Faculty of Humanities**

ABSTRACT

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**“SPANISH INTONATION OF HUNGARIAN LEARNERS OF SPANISH:
YES-OR-NO QUESTIONS”**

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The title of my PhD dissertation is “Spanish Intonation of Hungarian Learners of Spanish: Yes-or-No Questions”.

The dissertation discusses topics on the basis of the following three corpora:

- a Spanish corpus (Corpus 1), of the intonation of Spanish yes-no questions, by native Spanish speakers;
- a Hungarian corpus (Corpus 2), of the intonation of Hungarian yes-no questions by native Hungarian speakers;
- a Spanish corpus (Corpus 3), of the intonation of Spanish yes-no questions by Hungarian learners of Spanish.

The three corpora consist of read and spontaneous sentences, and I use the software Praat for intonational analysis.

The following works serve as a basis for the theoretical background of my investigations: Cantero Serena (2002), Font-Rotchés (2007) and Cantero—Font-Rotchés (2007) for the Spanish, and Varga, L. (2002) for the Hungarian research. The intonational analysis uses Cantero’s theory in both Hungarian and Spanish, so as to be able to compare intonational phenomena in a common framework. This is especially necessary for the examination of the intonation of the Spanish utterances produced by Hungarian learners of Spanish, in order to see to what extent this intonation contains unwanted features of Hungarian intonation.

The structure of the dissertation is as follows:

Chapter 1: Introduction.

Chapter 2: The theoretical background: Cantero’s model.

Chapter 3: Spanish melodic patterns recognised by Cantero.

Chapter 4: The intonation of Hungarian.

Chapter 5: Types of Spanish yes-no questions and their intonational patterns.

Chapter 6: Types of Hungarian yes-no questions and their intonational patterns.

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Appendix 1: Corpus 1

Appendix 2: Corpus 2

Appendix 3: Corpus 3

Chapter 1: Introduction.

This chapter presents the goals of this dissertation, and offers a brief outline of the most influential schools of intonational research: the British contour-based tradition, the American structuralist level-based approach, and the by now wide-spread autosegmental analysis of intonation, and mentions the Dutch School as well, in which contour standardization has an important role. Cantero's approach is nearest to the British tradition, but standardization plays an important role in it, too.

Cantero's theory has special significance within the research of Spanish intonation, because:

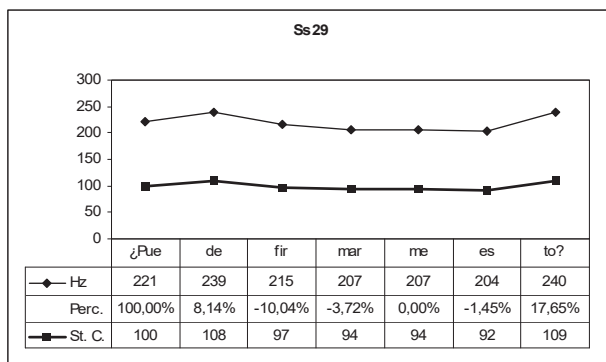
- it uses a standardization procedure, based on a scale of 100, which is easy to handle and is convenient for analyzing the contours produced by different speakers;
- it is based on a large corpus of spontaneous speech and offers a detailed description of European Spanish melodic patterns, of which it distinguishes 12 characteristic types;
- it aims to present results useful for applied linguistics as well.

Chapter 2: The theoretical background: Cantero's model.

Cantero takes his intonational data from spontaneous speech and accepts nothing but the phonetic reality as the basis of analysis. He analyses the intonation of each utterance with a voice analysis-and-synthesis programme, and standardizes the received results – the F_0 value of each syllable – so that the intonation of the sentences by different speakers could be compared. The standardization procedure consists in representing the F_0 value of each syllable as a percentage which the F_0 value amounts to relative to the F_0 value of the preceding syllable, while giving the first syllable the arbitrary percentage of 100%. For example, if in the sentence, ¿Puede firmarme esto? 'Could you sign this for me?' the measured F_0 value for the first syllable is 221 Hz, and for the second syllable, 239 Hz, then it means a rise of 8,14% between the first and the second syllables; if the first syllable is given a value of 100 as a relative value, the second syllable must be given 108. In (1) it can be seen that the standardized curve is melodically identical to the original one:

(1)

| ¿'Puede firmarme 'esto?|
 can-3sg sign-to me this
 'Could you sign this for me?'



symbols: Hz =absolute F₀ values in Hertz; Perc. = percentages; St. C. = Standard Curve.

According to Cantero, intonation analysis comprises three levels:

At the **prelinguistic** level, intonation acts as a means of organising the phonic blocs into discourse, it is responsible for the comprehension of the lexical content of the text. The linguistic level corresponds to the phonological function of the intonation, responsible for expressing its own meaning at the text-level and expressing the speaker's intention by means of intonation. The paralinguistic level belongs to pragmatics, the level of emotions expressed by intonation, which cannot be systematized, is individual and context-dependent.

Cantero's theory also focusses on the relationship between intonation and accent, but in his view accent plays a role especially at the prelinguistic level. The phonetic hierarchy in his model is the following: syllables are organized into **Rhythmic Groups** (Grupos Rítmicos), Rhythmic Groups, into **Phonic Groups** (Grupos Fónicos). Each Rhythmic Group is built around a lexical stress (called **Paradigmatic Accent**, Acento Paradigmático), whereas the Phonic Groups are constructed around a higher level accent, called **Syntagmatic Accent** (Acento Sintagmático). The Syntagmatic Accent is the hierarchically highest-ranking Paradigmatic Accent of a Phonic Group. The Syntagmatic Accent is characterized by carrying the tonal inflection, which, as the Syntagmatic Accent tends to coincide with the last Paradigmatic Accent of the Phonic Group, is called **Final Inflection** (Inflexión Final), henceforth abbreviated as FI. The hierarchy is reflected in (2), with our previous example:

(2)



According to Cantero, there is an **inflection** in the curve if between two melodic units there is a considerable F_0 difference. Syllables can contain one or more melodic units (= **moras**) depending on whether their nuclei are accented or not. Unstressed syllables consist of one mora, whereas stressed syllables, when they carry a tonal inflection, can consist of two or more moras, depending on the nature of the tonal inflection: simple inflections require two moras, and complex inflections, three. This means that accented syllables in Spanish can carry more moras, i.e., they are longer than unstressed syllables.

From this brief review of the theory, it is obvious that there are two Hungarian phenomena which differ in nature from their Spanish counterparts, and are thus difficult to handle within Cantero's framework:

- Hungarian vowels are inherently short or long, and this has nothing to do with accent;
- in some Hungarian intonation patterns the most conspicuous (part) of the tonal inflection is not necessarily tied to a stressed syllable. This can be observed in the ordinary yes-no question intonation pattern, the rise-fall, where the fall, and occasionally even the rise, can occur at a syllable which has no lexical stress. For example the interrogative *Becsuktad az ablakot?* 'Have you closed the window?' is asked with a melody whose peak (where the rise ends and the fall starts) is on a syllable which does not contain a lexical stress.

Chapter 3: Spanish melodic patterns recognised by Cantero

Cantero's theory has been applied primarily for describing Spanish intonation. He introduces a new interpretation of the notion of **toneme** within the linguistic level of intonation. For him a toneme is linguistic sign, made up by a combination of three binary features. These features are the \pm interrogative, \pm suspended, \pm emphatic, which yield 8 possible combinations and serve to describe the intonation of a given language. The most neutral toneme is the combination of /-interrogative, -suspended, -emphatic/; whereas the neutral interrogative intonation is expressed by the toneme /+interrogative, -suspended, -emphatic/. This means that the intonation as a linguistic sign superimposed on a (part of a) sentence can express three concepts: suspension, interrogation and emphasis, and the lack of them. According to

Cantero, a speaker can systematically express combinations of these three kinds of contents to the listener with his/her intonation, and nothing else.

Chapter 4: The intonation of Hungarian.

From the nuclear contours recognized for Hungarian (cf. Varga: 2002), I will examine the 9 most important in themselves, and also from the point of view of what impression they can make on Spanish listeners in the light of Cantero's theory. The most important difference lies in the realization of the Final Inflection: in Hungarian, inflections involving the most relevant F_0 variations in the utterance are not always triggered directly by the last accented syllable but by a later syllable. It is also a considerable difference that in Hungarian pitch range is narrower than in certain Spanish melodic patterns, both in the Final Inflection and in the whole utterance.

Chapter 5: Types of Spanish yes-no questions and their intonational patterns.

Cantero found 12 **melodic patterns** (Patrón Melódico) in Spanish spontaneous speech. Among these, interrogative intonation, the toneme /+interrogative, –suspended, –emphatic/, is expressed by patterns in which the FI contains a rise. This does not mean, naturally, that every Spanish question is asked with a rising FI, only that the intonation decoded as interrogative by Spanish listeners has this characteristic. There are questions, for example those introduced by a grammatical particle, whose interrogative nature is not (exclusively) expressed by intonation, but by the grammatical particle, and for that reason, its intonation does not necessarily carry the interrogative meaning for the listener. The most typical interrogative intonation in Spanish shows a final rise of more than 70%, which stretches from the last accented syllable and its direction is maintained throughout the melody. In contrast with earlier claims in the literature on Spanish yes-no question intonation, this is not the only melodic pattern possible in yes-no questions; we also find smaller final rises, rise-falls, and even deeper falls in the melodic patterns of Spanish yes-no questions.

Chapter 6: Types of Hungarian yes-no questions and their intonational patterns.

In Hungarian, the rising-falling contour is the characteristic intonation of ordinary yes-no questions. This chapter focuses on the peculiar features and most frequent subtypes of this

contour, but it also examines intonation patterns of echo (i.e. incredulous/repetitive and clarifying/exclamative) yes-no questions, of yes-no questions that contain a grammatical particle, and of yes-no questions followed by a vocative. I will also show in which other sentence types can a rising-falling melody occur, apart from yes-no interrogatives. As my Hungarian corpus (Corpus 2) testifies, in the rising-falling patterns the rise and the fall are realized most characteristically on the last three syllables of the utterance, independently of whether or not there is a lexical stress on one of these syllables. The rise may start from the accented syllable, but its most conspicuous part can be localized between the ante-penultimate and the penultimate syllables. Normally the rise has a narrower pitch range (15-30%) than the fall, which takes place between the penultimate syllable and the last syllable. The fall is normally between 30-50%, but interestingly the rise, though smaller, is still perceived to be more relevant by Spanish listeners.

Chapter 7: Predictions about the ways Hungarian speakers realize the intonation of Spanish yes-no questions

The intonational phenomena which appear in the yes-no questions of the two languages and which I compare in my dissertation, are the following:

- at the prelinguistic level, the relationship between the Syntagmatic Accent and the way the FI spreads, especially in the case of words ending with a stressed syllable;
- at the linguistic level, pitch range and the use of characteristic intonational patterns in the yes-no interrogatives.

As for the examined **prelinguistic aspects**, I predict the following:

- As in Hungarian there are practically no diphthongs (from a phonological point of view), Hungarians are expected to realize Spanish diphthongs as hiatuses. From this it follows that in monosyllables with rising diphthongs (in which the first element of the diphthong should be a semivowel, as in *bien*, 'well'), Hungarians will, erroneously, believe the first element to be a vowel and stress it, because in Hungarian stress automatically falls on the first syllable of a word.

- Concerning lexical stress, my hypothesis is that Hungarians will tend to follow their mother tongue and stress the first vowel of the word in Spanish, too, which seldom yields a correct result since the majority of Spanish words are stressed on their penult or their ult. Thus, words stressed on a wrong syllable will obstruct comprehension because they make it difficult for the listener to identify the blocks of speech marked by lexical stress. Wrongly

stressed words can be especially disturbing if they happen to carry the FI: words with final stress are not likely to be stressed on the ult by Hungarians, and thus, will not be given more than one mora.

As intonational meaning is mainly affected by differences at the linguistic level, it is this level that I will mostly concentrate on in the present study.

My predictions concerning the linguistic level of intonation are:

(a) Hungarians use a much narrower pitch range in their yes-no questions than native Spanish speakers do. This narrower pitch range characterizes both the FI and the entire utterance. Naturally, I will compare the relative values obtained by the standardization process. Lower F_0 values within the FI warn us that Hungarian questions, even when containing a rising FI, are not necessarily decoded as questions by the Spanish ear, because Spanish listeners identify utterances as questions especially if they have an FI with over 70% of rise, a percentage almost never reached in the FIs of Hungarian yes-no interrogatives. It is also important to note that Spanish listeners attribute emphasis to wider than “normal” pitch range; thus, Hungarians with their narrower pitch range, may sound unemphatic to the Spanish even if they want to sound emphatic.

(b) Hungarian and Spanish can use different intonational patterns in the same yes-no question type and Hungarians will transfer their native patterns to the Spanish yes-no interrogatives. Through my corpora I will compare the Spanish and Hungarian intonation patterns used in the following yes-no question types: ordinary yes-no questions, echo yes-no questions, and yes-no questions followed by a vocative.

In all these groups the two languages apply different intonational patterns. Unlike Hungarian, which phonologically uses only end-falling (mostly rising-falling) patterns in ordinary yes-no questions, Spanish applies a variety of patterns, but most typically a rising one, in which the final rise exceeds the maximum rising values applied by Hungarian. Interestingly, the Spanish language also makes use of rising-falling patterns similar to the Hungarian one, but there is a radical difference:

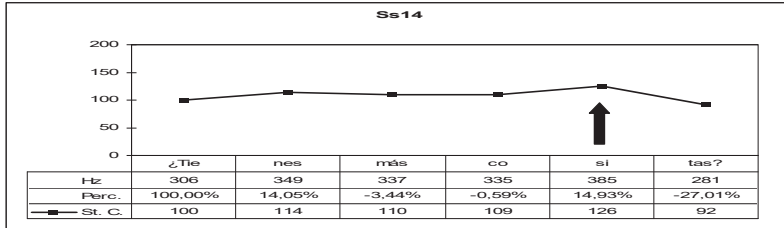
In Spanish, the rise ends on the last lexically stressed syllable (and starts on the syllable immediately before it), or it starts on the last lexically stressed syllable, whereas in Hungarian, the rise can occur without including a lexical stress, and the only criterion is that the rise must go up to the penult, see the following examples (3a) and (3b):

(3a)

| ¿Tienes más co'sitas?

have-2sg more little-things

'Do you have any other things?'

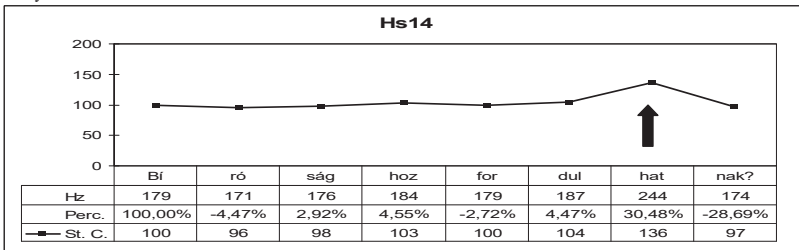


(3b)

| 'Bíró'sághoz fordulhatnak?

court-to turn-can-3pl

'Can you turn to law court?'



It is important to emphasize that the rising-falling intonation patterns of utterances with a maximally disyllabic word at their end are realized with phonologically rising FIs in Hungarian, just as in Spanish. The intonation of echo yes-no questions is not radically different from the intonation of ordinary yes-no questions in Spanish, but in Hungarian there are several Syntagmatic Accents each triggering a rising-falling FI. If a yes-no question is followed by a vocative, in Hungarian the interrogative retains its rising-falling FI, and the vocative is realized with a falling FI. In Spanish, however, the yes-no interrogative is characterized by a moderate rise and the vocative, by a considerable rise in the FI, so the typical rising FI is attached to the vocative.

If the Hungarian and Spanish intonation differ in any of the enumerated yes-no question types, I will examine which pattern the Hungarian learners use in their Spanish yes-no questions. If the Hungarian and Spanish patterns coincide, I will see whether Hungarians make use of this coincidence in their Spanish yes-no interrogatives as well.

Chapter 8: Validation of the predictions and pedagogical implications

This is the chapter in which the hypotheses are validated on the basis of Corpus 3. Based on my results, I wish to draw conclusions about those aspects of Spanish intonation that must be specially emphasized in the pedagogical process of teaching Spanish to Hungarians. These are the following:

- In Spanish words ending with an accented syllable, Hungarians characteristically do not realize the FI as consisting of more than one mora;
- Hungarian learners of Spanish realize Spanish yes-no questions with a narrower pitch range than a native Spanish speaker does, both in the FI and in the whole utterance;
- The typical Hungarian pattern of repeated rise-falls is often transferred to Spanish echo yes-no questions. As in Spanish such repetition is unusual, this area also needs more attention in Hungarian Spanish language classrooms.

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